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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,421	02/26/2004	Roberto Angela	Q79951	2812
7590 04/18/2005 SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3202			EXAMINER NASRI, JAVAID H	
			ART UNIT 2839	PAPER NUMBER

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,421

Applicant(s)

ANGELA, ROBERTO

Examiner

Javaid Nasri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply.

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/29/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Abstract

1. The abstract is objected, because:
 - a) Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the instant case the abstract is in two paragraphs.

- b) In the abstract replace "former" and "later" with appropriate elements.

Claim Objections

2. Claims 1-20 are objected to because of the following informalities:
 - a) In claim 1, line 1, correct the spelling of "industrial".
 - b) In claim 1, line 3, phrase "possible" make the claim indefinite, whether the limitation is there or not.
 - c) In claim 1, line 5, "the frame of the robot" lacks antecedent base.
 - d) In claim 1, line 12, "the outer section" lacks antecedent base.
 - e) In claim 1, line 13, "the inner section" lacks antecedent base.

- f) In claim 1, lines 14 and 15, replace “former” and “later” with appropriate elements.
- g) In claim 11, line 3, delete “as per claim 1.....”.

Note: These are few examples only. Applicant is required to check all the claims and correct them accordingly.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the

- a) other electric cables and or fluid pipes, per claim 18,
- must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 2, 7 and 9-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Soska (6,369,353).

Soska discloses, **for claim 1**, An industrial robot (14) having a structure comprising two or more reciprocally articulated elements (see figure 2) with possible angular movement, an electronic unit (46) for controlling a functional device (see figure 1) carried by the frame of the robot (14), and at least a first optical fiber conductor (42), wherein the electronic unit is in signal communication with the functional device (see figure 1) through the first optical fiber conductor

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for the transmission of control signals, and the first optical fiber conductor (42) is part of a signal cable inserted into a tube (44), the outer section of the signal cable (42) having smaller dimensions than the dimensions of the inner section of the tube (44), so that the former can move within the latter (see figure 4), **for claim 2**, at least a portion of the tube (44) extends within the structure of the robot (14) see figure 3, **for claim 7**, a plurality of signal cables (42) are inserted into the tube (44), each comprising an optical fiber conductor (42) and at least a respective coating (see figure 6), **for claim 9**, a wrist device (30), **for claim 10**, a base and a upright mounted onto the base for turning around a first axis which is in vertical direction, an arm mounted onto the upright for swing around a second axis, a forearm articulated to the arm around a third axis and capable of rotating around a respective fourth axis, wherein the wrist device (30) is supported by the forearm (see figure 2) with possibility of rotation around at least two axis (53, not marked), **for claim 11**, hollow wrist, **for claim 12**, the functional device is supported by the hollow wrist (30, see figure 3), **for claim 13**, the tube extends at least partly within the base, the upright and the arm (see figure 2 and 3), **for claim 14**, the tube extends at least partly also within the forearm and the wrist element (30), **for claim 15**, at least a portion of the tube (44) extends loosely outside along the forearm and the wrist element (30) (see figure 3), **for claim 16**, a main portion of the tube (44) extends outside along the structure of the robot (see figures 3 and 4), **for claim 17**, guiding means (see figure 2), **for claim 18**, at least a part of the tube extends along the frame of the robot together with other electric cables and/or fluid pipes, so as to form a bundle guided through guiding means, **for claim 19**, the signal cable is longer than the tube (see figure 3),

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6. Claims 1-6 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Julien et al (6,565,126).

Julien et al discloses, **for claim 1**, An industrial robot having a structure comprising two or more reciprocally articulated elements (see figure 1) with possible angular movement, an electronic unit (17) for controlling a functional device (see figure 1) carried by the frame of the robot, and at least a first optical fiber conductor (28), wherein the electronic unit is in signal communication with the functional device (see figure 1) through the first optical fiber conductor for the transmission of control signals, and the first optical fiber conductor (28) is part of a signal cable inserted into a tube (123), the outer section of the signal cable (19) having smaller dimensions than the dimensions of the inner section of the tube (123), so that the former can move within the latter (see figure 4), **for claim 2**, at least a portion of the tube (123) extends within the structure of the robot (see figure 1), **for claim 3**, the signal cable (19) comprises at least a second optical fiber conductor (28), the first and second conductor being enclosed in a common coating (19a), **for claim 4**, the signal cable (19) is made up of the first conductor (28) and a coating of said first conductor (19a), **for claim 5**, the signal cable (19) comprises the first conductor (28) and at least a second optical fiber conductor (28), each conductor (28) having a respective coating (19a), the two conductors (28) being inserted into a common sheath (23) extending within the tube (123), **for claim 6**, the signal cable (19) comprises an inner insulator (19a), in which at least two optical fiber conductors (28) are dipped, and an outer coating (26), **for claim 8**, the tube (123) is made of a flexible material resisting to flattening and/or compression, in particular polyurethane (flexibility is not specified in the claim).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soska or Julien et al.

Soska or Julien et al. discloses all the limitations of claim 1, as shown above,

However, Soska or Julien et al. does not disclose:

- a) a lubricant is present on at least one between the outer surface of the signal cable and the inner surface of the tube. Official notice is taken that using a lubricant for easily sliding a cable into a conduit is well known in the art, therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Soska or Julien et al to use a lubricant between the outer surface of the signal cable and the inner surface of the tube to slide the cable into the tube easily.


Contact


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 571 272 2095. The examiner can normally be reached on Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on 571 272 2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Javaid Nasri
Primary Examiner
Art Unit 2839


Jhn
April 14, 2005